

APPENDIX D

AVAILABILITY REQUIREMENTS PROVISION

1. Overview. The contractor shall ensure a sustained high level of system availability and shall provide a detailed tracking and reporting of system availability. This provision will extend through the completion of the contract and contract options. DISA will evaluate the contractor's performance periodically. The contractor will be evaluated on system availability, problem analysis and correction, overall maintenance, and maintenance reports.

2. Definitions.

a. System Operating Hours. This is the total system operating hour for the period of evaluation. It is 24 hours each day.

b. System Down Time. This is the time during which the system or service is not operational, or is deemed not usable by the Hub or the User(s). This time includes time the system is down for software failure. If the system or service is operational but in need of minor adjustment, the system is not considered to be down. Examples of this would be video service color integrity, freeze frame graphics color integrity, noisy audio, etc. In these types of instances the service is usable but better quality can be achieved with minor adjustments. System downtime includes testing to ensure that the problem is corrected, which is included in the Equipment Repair Time. System down time, for contractor availability calculations, does not include Hub fault isolation time (para. 2.e., below), Hub delay time (para. 2.e., below), user facility delay time (para. 2.k., below), user delay time (para. 2.g., and 2.l., below), or off-duty hour grace time (para. 2.d., below). System down time, for contractor availability calculations, shall only be calculated for Category 1 failure (see paragraph 4.a.7).

c. Full Maintenance. The contractor shall provide full maintenance support during normal Government duty hours (7 a.m. 6:00 p.m., local time Monday through Friday, exclusive of Government holidays). Full maintenance support includes, but is not limited to on-call maintenance, preventive maintenance, EMI maintenance and testing, and depot maintenance.

d. Off-duty Hours. All times not included in normal Government duty hours (as defined in paragraph 2.c. above), are considered off-duty hours with on-call maintenance support. For the purpose of this provision, during off-duty hours Travel Time and Depot Preparation Time shall only be counted in contractor system down time by the amount

which their sum exceeds 60 minutes. This is the off-duty hour grace time. In emergency operations situations, full maintenance support will apply during off-duty hours.

e. Hub Fault Isolation Time. This time period begins when the Hub Technical Controller becomes aware of a system problem. (Time which may be utilized on the telephone to site personnel to correct or circumvent a problem is included). The time ends when the Hub Technical Controller has isolated the problem to the extent that he can define the problem to the contractor's depot maintenance dispatcher. If there is a delay between this time period and when the depot is called, that time is not included in the system down time calculation; it is considered as Hub delay time. The Hub Technical Controller logs these times.

f. Contractor Response Time.

(1) Depot Preparation Time. This is the time for the contractor maintenance person to gather spare parts, test equipment, and maintenance support resources. This time begins with a maintenance call from the Hub. It ends when the contractor maintenance person leaves the depot area or his or her duty site. The depot dispatcher logs these times.

(2) Travel Time. This time period begins when the contractor maintenance person leaves the depot or duty site to respond to a Hub work order (maintenance ticket). This time period ends when the contractor maintenance person arrives at the first security checkpoint at the facility. It is the responsibility of the contractor's dispatcher to log the departure time. It is the responsibility of the contractor's maintenance person to log the time of arrival at the facility checkpoint.

(3) Response Time. Contractor response time is the sum of Depot Preparation Time and Travel Time. The contractor's average response time for normal Government duty hours shall not exceed 60 minutes. NOTE: During non-duty hours, the contractor is allowed an additional 60 minutes (totaling 120 minutes), as described in para. 2.d., above.

g. Equipment Repair Time. This time period begins when the contractor's maintenance person is physically present in the room housing the equipment. The period ends when the equipment is verified to be operational. The equipment repair time "clock" may be stopped if the maintenance person leaves the room for the convenience of the user, which will be counted as User delay time; or if the maintenance person leaves the room to obtain additional parts or equipment from the depot, which will be counted as depot

preparation time until the parts or equipment arrives on the site, and the equipment repair time "clock" is resumed. It is the obligation of the contractor's maintenance person to call the Hub at these times. It is the obligation of the Hub Technical Controller to record these times for record keeping purposes.

h. Technical Control Failures. These are indications of failures sensed by the technical control at the Hub and alarm systems at the nodes and the Hub. They sense safety, security or equipment malfunctions. They sense both hard failures and intermittent failures, and are included for system down time calculations.

i. Hard Failures. These are failures of system equipment which are not intermittent in nature and require replacement of parts to return the system or service to a fully operational state. These failures are included for system down time calculations.

j. Intermittent Failures. These are failures which cause occasional malfunction of system or service operation but are cleared without finding a failed device or problem. The most common of the intermittent failures is those which are cleared by a reset or power off/on cycle. These failures are included for system downtime calculations. Failures which are cleared by the Hub ' or otherwise eliminated prior to the contractor being called by the Hub, are not included for system downtime calculations.

k. Security delays. These are delays incurred during the execution of a maintenance response which are caused by agency security procedures. The most common delays are verification of clearances and waiting for agency escorts. These delays are outside of the contractor's control and are recorded as User facility delay time. They are not included in the system down time calculation.

l. User Delays. These User delays are caused by the user's inability to allocate the equipment at his or her facility to maintenance because of other priorities. Also, the user may elect to postpone repair of the equipment because it is not needed immediately and the conference facility cannot allow the presence of a contractor maintenance person. There are other cases where the facility is not manned around the clock; and therefore, maintenance can only occur during normal Government duty hours. These delays are not included in the system down time calculation.

m. Consumables. These are user-provided supplies which must be continuously supplied for the user's ongoing operation of the

SVTS. Each user is responsible for providing the following items for his or her ongoing operation.

(1) Hub:

(a) Replacement ribbons for the Network Control and Technical Control printers

(b) Tractor feed paper for the Network Control and Technical Control printers

(c) Magnetic tapes for the tape audit system

(2) Nodes:

(a) Replacement ribbons for the DEC printer.

(b) Paper for the DEC printer and maintenance printer - 9 1/2 inch fanfold

(c) Replacement ribbon cartridges for the maintenance printer and the scheduler printer

(d) Replacement toner cartridges for the Canon (HRG) printer

(e) 8 1/2 inch plain sheet of paper for the Canon (HRG) printer

(f) Color ink sheet rolls for the Seiko printer

(g) Paper rolls for the Seiko printer

(h) Graphics tablet ink refills for the Databeam (HRG) system

(3) General: Replacement ceiling light bulbs for the console area and the ESA/TC enclosures.

n. Facilities Equipment. This is system support equipment which is under the jurisdiction of the user, and is not maintained by the contractor under this contract/contract option unless specified. Facilities equipment includes the following categories of items:

(1) Air-conditioning equipment except for S1, S16 and S17 which are contractor maintained.

- (2) Facility security systems
- (3) Facility fire detection and control systems
- (4) Facility water detection systems
- (5) Structural space in which the system is installed
- (6) UPS systems except for S1, S2, S5, S11, S12, S13, S14, S15, and S16 which are contractor maintained.
- (7) Facility prime power systems

3. Availability Calculation (Category 1 failures only)

a. The contractor system availability shall be determined by the following formula: $*A = 1 - (TR + TT + C) / SOH$

Where:

- A = System Availability
- TR = Equipment Repair Time (cumulative, in hours)
- TT = Travel Time (cumulative, in hours)
- C = Depot Preparation Time (cumulative, in hours)
- SOH = System operating hours (for the time period)

* Note: Special calculations for off-duty hours; downtime will only count TT + C to the extent that their sum exceeds 60 minutes.

b. The contractor system availability (A) requirement for the total Node and Hub operational system is 95 percent.

c. The contractor equipment repair time (TR) requirement is that TR will be 90 minutes or less 80 percent of the time.

d. The System Availability and the Excess Equipment Repair Time shall be tracked on a monthly basis. If the availability requirement or the excess equipment repair time requirement is not met in any 3 months of any consecutive 6 months, the rights and remedies of Section V apply.

e. Preventive maintenance time is not included in the contractor's availability requirements, unless it exceeds 240 minutes/site/month. Any time in excess of 240 minutes/site/month will be added to the cumulative equipment repair time (TR).

f. There are two sites which are outside the Washington, DC, Metropolitan Area. Repairs for these two sites will not be included in the availability calculation. A set of spares is

provided at each of these two sites. The repair requirements for the two sites are:

(1) Response time shall not exceed 12 hours.

(2) Phone support shall be provided 24 hours/day, seven days/week.

4. Measurement and Verification Procedures. In order for the parties to have a common agreement on how to measure system availability, the following rules and data collection guidelines are defined.

a. The Hub Technical Controller is the central point from which all maintenance actions are initiated and maintenance records are kept. For each maintenance call the Hub will maintain the following records:

(1) The time that the trouble was first determined to exist. This would usually be the result of a Technical Control fault indication or a User calling in a problem from a node.

(2) The time that the Hub Technical Controller isolated the trouble to the point that a maintenance person (maintainer) could be dispatched from the depot.

(3) The time that the Technical controller initiated a maintenance call to the depot, or during off-duty hours to the standby maintenance phone number, and the date/time that the user wants the maintainer at the site (ASAP or an appointment).

(4) The time that the contractor's maintainer arrived at the node.

(5) The time that the maintenance action was verified to be completed and the equipment returned to operational status, or the time the maintainer left the site with the maintenance uncompleted action.

(6) A description of the problem and how the problem was resolved.

(7) The category of maintenance applicable to the maintenance action. This would be either Category 1, which is contractor-furnished equipment (to include software), Category 2, which is scheduled preventive maintenance; Category 3, which is operator error; Category 4, which is Government-furnished agency equipment; Category 5, which is Government facility equipment;

Category 6, which is Communication Services Provider equipment; or Category 7 which is other (EMI, DISA tasks, etc.)

b. The contractor's depot dispatcher shall maintain a set of maintenance actions logs which will provide a complete record of all contractor maintenance actions. The log filled out by the contractor's dispatcher shall be reconciled to the Hub log on a weekly basis.

c. The contractor's maintainer shall call the Hub as soon as he or she arrives at the equipment area. He or she shall provide the Hub Technical Controller with the time of arrival at the security checkpoint. The maintainer shall also call the Hub as soon as the action is completed or if he or she is leaving the facility with the action uncompleted. Before the maintainer leaves the site, he or she shall leave a record of the visit showing time arrived, time departed, maintenance performed and status of the maintenance action. This information shall be filed in the site's maintenance log. When the maintainer returns to the depot, he or she shall provide the dispatcher with all necessary data to complete the maintenance report.

d. Availability Reporting,

(1) Each month the contractor shall provide a detailed report to the Government, listing and analyzing all of the hardware and software failures that affected any facet of the operational, technical control, and management functions. Degradations that limit or preclude user satisfaction shall also be included in the report to the extent that the contractor has this information. The availability analysis shall contain the calculated System Availability (A) and the calculated exceeded equipment repair time.

(2) The analysis shall be based upon inputs from the Hub Net and Technical Control outage information and shall also include contractor-gathered failure and degradation information. The Hub logs shall be the official source of outage time for the availability analysis. Conflicts between Hub and Depot logs are to be resolved prior to the availability analysis.

e. The Government will review the contractor's availability analysis and reports to validate outage information and fault attribution. In case of error, the Government may cause portions or reports to be redone with corrected information and analysis.

f. The required data in the monthly report is contained in

paragraph 7 of this provision.

5. Rights and Remedies

a. When the availability or exceeded equipment repair time does not meet the values specified in Section III in any single month, the contractor shall include an analysis in the availability report of the salient problems. Further the contractor shall explain those problems which caused the availability to be reduced and, if applicable, the resolutions.

b. If such failure to meet availability or exceeded equipment repair time occurs during any 3 months of any consecutive 6 months, the contractor shall formally document and propose those corrective actions required to meet the required figures.

c. Whenever the availability or equipment repair time has failed to meet the stated availability requirements in any 3 months of any consecutive 6 months the Government may convene a joint Government/Contractor evaluation team to review the analysis and proposed corrective actions.

d. The contractor may, with DISA approval and funding, initiate some reasonable corrective actions at any time to achieve the required availability.

e. Initiatives which may be taken to meet the availability requirements include but are not limited to the following:

- (1) Modifying or replacing failure prone devices.
- (2) Improving the subcontractor support base.
- (3) Improving the technical control capability.
- (4) Improving the fault isolation capability.
- (5) Modifying the PM procedures.
- (6) Providing additional training aids.
- (7) Adding spares in critical areas.
- (8) Adding test equipment.

(9) Upgrading commercial firmware/software.

(10) Reengineering the custom software

6. Limitations and Stipulations.

a. The following shall not be counted as system down time for availability or equipment repair time calculation purposes:

(1) Failures traced to hardware or software design errors.

(2) Aging failures of equipment having a limited life cycle, such as monitors and printers.

(3) Failure of the WAWS if it has been reasonably determined that a WAWS failure actually existed.

(4) Failure of a KG.

(5) Qualitative maintenance or minor adjustments of less than 15 minutes.

(6) Failures discovered and corrected by the contractor maintenance person performing scheduled preventive maintenance. If not immediately corrected, a new Hub ticket shall be opened by the contractor maintenance person.

(7) Facility problems associated with hardware that is not maintained under this contract.

(8) Lack of consumables that are the responsibility of the users.

(9) Node user errors when the operation was covered by documentation or training available to the user.

(10) Hub controller errors when the correct information was covered by documentation or training available to the controller.

(11) Failure of equipment or software/firmware not maintained under this contract.

(12) DISA-initiated engineering or testing actions (but not repair resulting from the breakdown).

c. Software problems shall be counted only to the

extent the system or service is non-operational or unusable. Should software problems surface, the contractor shall provide procedures to work around the software problems in order to maintain the system in an operational condition prior to correction of the software.

d. Non-availability of Parts - Should the contractors become aware that a vendor has discontinued manufacture of an item, the contractor shall provide the Contracting Officer with an availability impact analysis and shall recommend a suitable replacement item for replenishment spares. The replacement item shall be documented by a specification control drawing and implemented via an engineering change proposal, at the Government's option. Should the Government choose not to replace the discontinued part within 60 days of the analysis and recommendation, system down time associated with the lack of spares for the discontinued part will be excluded for availability calculation purposes.

e. Failure of user-provided external port equipment shall be excluded for availability calculation purposes.

Failure of SVTS external port equipment shall be excluded if the port has not been operationally configured. Failure of external port alarms is not excluded for availability calculation purposes.

f. Failure of equipment due to unauthorized tampering of the equipment by the user shall be excluded for availability calculation purposes.

g. Maintenance delays that are outside the control of the contractor such as security delays, Hub delays and User delays shall be excluded for availability calculation purposes.

h. There may be situations whereby one or more abnormal maintenance events distort the maintenance or availability data (e.g., snow storms), and which are generally outside the control of the contractor or Government. When these situations occur they will be pointed out in the report and not included in the availability analysis. If there is corrective action which can be implemented to prevent recurrence of these abnormal situations, or which can significantly reduce their impact, that corrective action shall be pointed out in the monthly report.

7. Monthly Maintenance Report

a. Overview

The monthly maintenance report shall consist of a copy of all maintenance tickets opened for the month, all tickets still opened from previous months, all STRs for the month, statistics for the month, statistics for the past four months, statistics for the past 12 months, statistics for the year to date, a summary of the significant maintenance items for the month, analysis of important system failure(s) during the month, and any other significant information. The contractor shall also update the list of opened STRs, and provide the current status of STRs. An updated diskette(s) of the maintenance support database shall be provided with the monthly report.

b. Minimum Requirements

(1) Maintenance Tickets - Maintenance tickets are only applicable for maintenance actions performed in whole or in part by the contractor or his subcontractors. Maintenance tickets shall be completed for both hardware and software maintenance requests. The contractor shall coordinate the maintenance ticket format with the Government. The maintenance tickets shall include, as a minimum, the following data:

- (a) Failure report #
- (b) Related report #, if applicable
- (c) Site # visited
- (d) Failure date and time
- (e) Hub ticket#
- (f) Failure Category
- (g) Time contractor was notified
- (h) Depot preparation time and travel time
- (i) Repair time
- (j) Delay time by type (Hub, facility, user)
- (k) Down time
- (l) Problem and service affected (service code)
- (m) Repair action and parts replaced (parts code)

(2) Statistics - The maintenance summary report shall include, as a minimum, the following:

- (a) Availability calculations for the month
- (b) Total and average time for: Hub fault isolation plus Hub delay, normal duty hours= response, off-duty hours= response, repair, and user delays
- (c) Number of tickets in each failure category and total number of tickets
- (d) PMs scheduled, completed, and outstanding for the month and for the year to date
- (e) Failed parts= statistics for the month and year to date
- (f) Service (code) statistics for the month and the year to date
- (g) Summary listing of all tickets, showing Hub tickets#, site#, reported problem, failure date, failure category and down time
- (h) EMI tests scheduled, completed, and results
(NOTE: Detailed test results shall be provided separately.)

(3) Significant Maintenance Items/Analyses - The maintenance summary report shall include, as minimum, the following reports/analyses:

- (a) EMI report for the month
- (b) Failures during the month which interrupted or prevented user conferences
- (c) Analysis of significant hardware or software failures and/or problems
- (d) Analysis of recurring failures or events
- (e) Report on User and/or Hub problems, if any
- (f) Report on new and outstanding STRs
- (g) Report on software reloads in the month, if any

